# Contemporary and traditional practices towards the conservation and management of edible insects across the globe: a review

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## Abstract

Edible insects (EIs) have become a subject of great interest globally in terms of their exploitation, consumption, and conservation as an environmentally sustainable source of food for the rapidly growing human population. Despite this, their sustainable exploitation and conservation may not be achieved as a result of several potential threats faced by insects. This review collated information on the available contemporary and traditional conservation and management practices from different parts of the globe for emulation to improve entomophagy sustainability. The review shows dominance by contemporary practices in developed regions and traditional practices in developing regions with prominent entomophagy. The key contemporary practices are land protection and land management, survey and monitoring, legislative actions, creation of protected areas, and biosecurity measures. On the other hand, traditional practices are mainly environmentally friendly harvesting, protection of habitats, local restrictions on harvesting, monitoring, and semi-natural farming. The review also shows inadequacy in

comprehensive ecological surveys and monitoring of insects worldwide, thus limiting data collection and decision-making for sustainable EI exploitation and conservation. It identifies biological invasions and pesticide contamination as some of the major potential hazards associated with the sustainability of entomophagy, calling for their research and keen monitoring. Traditional knowledge practices relevant for sustainable exploitation, monitoring, and conservation of EIs exist among rural communities globally, especially in Asia, Africa, and South America. It is of relevance to combine this knowledge and scientific research to further improve the understanding, monitoring, and conservation of EIs as human food and animal feed resources.

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